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Investigation of the effect of active diluents on the molecular mobility and topology of cross-linked amine epoxy-adamantane polymers

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Abstract

© 2014, Pleiades Publishing, Ltd. Using the framework of the concepts about the nature of large-scale mobility of kinetic units, the interconnection between kinetic and structural heterogeneity of molecules of the epoxy polymers based on diglycidyl ester of diphenylolpropane cured with diaminomethyladamantane upon dilution with monofunctional reactive compounds is studied by the example of phenylglycidyl ester. The possibility of controlling the changes in structural heterogeneity of the polymers is shown, which is important for achieving optimal properties of novel materials under development (adhesives, sealants, and so on).

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Keywords

kinetic and structural heterogeneity of molecules, mobility of polymer kinetic units, nodal and terminal fragments, parts of proton assemblies